

A Progression Toward Mastery

Assessment Task Item		STEP 1 Missing or incorrect answer and little evidence of reasoning or application of mathematics to solve the problem.	STEP 2 Missing or incorrect answer but evidence of some reasoning or application of mathematics to solve the problem.	STEP 3 A correct answer with some evidence of reasoning or application of mathematics to solve the problem, <u>or</u> an incorrect answer with substantial evidence of solid reasoning or application of mathematics to solve the problem.	STEP 4 A correct answer supported by substantial evidence of solid reasoning or application of mathematics to solve the problem.
1	a 6.NS.C.5 6.NS.C.6a	Student is able to determine that the given water level is below normal (or low water) but does not indicate a clear understanding of zero or the numbers above and below zero on the number line. <u>OR</u> Student is unable to determine that the water level is below normal.	Student correctly states that 0 represents the normal water level but does not clearly describe the meanings of numbers above and below zero on the number line.	Student correctly states that 0 represents the normal water level and that either the numbers above zero represent above normal water levels or the numbers below zero represent below normal water levels but does not clearly describe both.	Student correctly states that 0 represents normal water level, numbers above zero (or positive numbers) represent above normal water levels, and numbers below zero (or negative numbers) represent below normal water levels.
	b 6.NS.C.5	Student response is missing or incomplete. For instance, student makes a general statement that the river's water level is below normal but does not refer to magnitude, direction, or a location on the number line.	Student response is incomplete but shows some evidence of understanding such as stating that the water level is at -2 or -1.9 or that the water level is 2 feet (or 1.9 feet) but without details such as units of measurement or direction.	Student correctly interprets the picture to indicate that the current water level is below normal but states it is <i>exactly</i> 2 feet below normal water level, rather than <i>nearly</i> 2 feet below normal water level.	Student response is correct and complete. Student states that the picture indicates that the river's current water level is <i>about</i> 2 feet below normal water level.

	c 6.NS.C.5 6.NS.C.6a	<p>Student answer is incomplete or missing. Explanation shows little or no evidence of how to find opposites on a number line.</p>	<p>Student completes the first step stating that the opposite of -2 is 2 (or the opposite of -1.9 is 1.9, etc.) but with no further details or correct statements.</p>	<p>Student correctly states that the opposite of -2 is 2 (or the opposite of -1.9 is 1.9, etc.) and that in the opposite situation the river's water level would be higher than normal but does not clearly describe its location on the number line/gauge. <u>OR</u> Student correctly identifies and clearly describes the location of the opposite number on the number line/gauge but does not address what this level would mean in the context of the situation.</p>	<p>Student correctly addresses all parts of the question. Student correctly states that the opposite of -2 is 2 (or the opposite of -1.9 is 1.9, etc.) and explains where the positive number is located specifying the number of units above 0 or on the opposite side of zero from the negative value. Student also states that the positive number would mean the river's water level is that many feet higher than the normal level.</p>
	d 6.NS.C.5	<p>Student explanation is missing. <u>OR</u> The written explanation demonstrates little or no correct mathematical interpretation of the situation such as claiming that tomorrow's water level would be below the current level shown.</p>	<p>Student correctly states that the water level would be higher than the level shown but does not provide a specific reading (level) and does not provide adequate reasoning to support the claim.</p>	<p>Student correctly states that the water would rise to a specific level higher than the level shown and identifies the new level but fails to provide a clear explanation to support the claim. <u>OR</u> Student correctly states that the water level would be higher than the level shown and provides adequate reasoning to support the claim but does not provide a specific reading (level).</p>	<p>Student response is complete and correct. Student states that the water level would rise to a specific level higher than the level shown, identifies a specific new level, and provides a clear explanation to support the claim.</p>
2	a 6.NS.C.5 6.NS.C.6c	<p>Student accurately locates and labels two of the five points, at most, on the number line using rational numbers.</p>	<p>Student accurately locates and labels three of the five points on the number line using rational numbers.</p>	<p>Student accurately locates and labels four of the five points on the number line using rational numbers.</p>	<p>Student accurately locates and labels all five points on the number line using rational numbers.</p>

	b 6.NS.C.6c 6.NS.C.7c	Student response is incomplete and incorrect such as stating that a competitor other than Florence is closest to the checkpoint without explaining why.	Student states that Florence is closest to the checkpoint without justification. <u>OR</u> Student states another competitor's name and attempts to justify the answer, but the explanation is incomplete.	Student states that Florence is closest to the checkpoint, but the justification contains an error. <u>OR</u> Student states another competitor's name and justifies the answer based on the response to part (a).	Student correctly states that Florence is closest to the checkpoint and provides clear and accurate justification for the claim.
	c 6.NS.C.5 6.NS.C.6c 6.NS.C.7c	Student response is incomplete and incorrect, such as stating that two competitors <i>other than</i> Rebecca and Lita are the same distance from the checkpoint, and no further explanation is provided.	Student is able to determine that Rebecca and Lita are the same distance away from the checkpoint, but the explanation does not address whether or not the competitors are in the same location.	Student states that Rebecca and Lita are the same distance from the checkpoint but on opposite sides; however, the explanation does not specifically answer whether or not the competitors are in the same location.	Student correctly indicates and explains that Rebecca and Lita are both 0.5 miles from the checkpoint but that they are positioned on opposite sides of the checkpoint and so they are not in the same location.
	d 6.NS.C.7b 6.NS.C.7c	Student explanation shows little or no evidence of understanding. For instance, student incorrectly states Nancy is closer to finishing the race with no explanation why.	Student incorrectly determines Nancy is closer to finishing the race but uses a valid argument based on earlier work. <u>OR</u> Student correctly states that Florence is closer to finishing the race but with no further explanation.	Student correctly states Florence is closer to finishing the race, but the justification for the claim contains an error in reasoning or a misrepresentation.	Student correctly determines and states that Florence is closer to finishing the race and justifies the claim using valid and detailed reasoning.
3	a 6.NS.C.7a 6.NS.C.7b	Student explanation shows little or no evidence of understanding. For instance, student states that neither Marta nor Andréa are correct.	Student states that Marta is correct but does not support the claim. <u>OR</u> Student states that Andréa is correct, but the explanation includes an error in reasoning.	Student correctly states that Marta is correct, but the explanation contains reasoning that is not clear and complete.	Student response is correct and complete. Student states that Marta is correct, justifying the claim by accurately describing the order of the rational numbers on the number line.
	b 6.NS.C.7b 6.NS.C.7d	Student incorrectly states cooler A or B and C met the goal and provides no justification or provides an explanation that contains multiple	Student states that cooler C met the goal but provides no justification for the claim. <u>OR</u> Student determines that coolers A and C met the	Student correctly states that cooler C met the goal and justifies the claim, but the explanation contains a slight error. For instance, student describes the numbers	Student correctly states that cooler C met the goal and justifies the claim by describing that "more than 3 degrees below zero" indicates the numbers must be to the left of -3 (below

		errors in reasoning.	goal and includes a complete explanation but erroneously identifies -2.91 degrees as being more than 3 degrees below zero.	to the left of -3 on the number line as being more than -3 rather than less than -3 .	-3) on the number line and that -4.3 is the only piece of data that meets that criteria.
4	a 6.NS.C.5 6.NS.C.7b	Student's comparison of the elevation samples to the level of the road is incorrect. The written work shows little or no understanding of ordering rational numbers.	Student's comparison of the elevation samples to the level of the road is partially correct. Student correctly compares only one or two of the samples (B, C, or E) to the elevation of the road.	Student states that sample C is higher than the elevation of the road and sample E is lower than the elevation of the road and that sample B is about level with the road but <i>does not distinguish</i> whether sample B's elevation level is higher or lower than 830 feet.	Student accurately describes each sample's relative position compared to the elevation of the road, stating that samples B and C are higher than the elevation of the road, and sample E is lower than the elevation of the road.
	b 6.NS.C.7b	Student response shows little or no evidence of understanding. Student may place the negative values left of the positive values but made several errors in order.	Student response shows some evidence of understanding. Student correctly orders four of the six values from least to greatest.	Student correctly orders all six values from least to greatest but copies one of the values incorrectly.	Student correctly orders and writes all six values from least to greatest (i.e., $-4.5 < -0.9 < -0.5 < 1.3 < 2.2 < 3.1$
	c 6.NS.C.7c	Student indicates sample K but does not provide any further detail. <u>OR</u> Student states a different sample such as G and justifies the choice using clear reasoning but does not address absolute value.	Student indicates sample K and provides a valid explanation but does not address absolute value in the explanation. <u>OR</u> Student incorrectly states sample G and justifies the choice by addressing the order of the positive numbers.	Student correctly states sample K and justifies the statement using absolute value correctly in the explanation, but the explanation is not complete. <u>OR</u> Student incorrectly states sample G and justifies the choice using absolute value in a correct manner but without considering the absolute value of -4.5 for sample K.	Student correctly states sample K is the farthest from the elevation of the road and justifies the statement by comparing the absolute values of the samples from the table in part (b) using the order of rational numbers to reach the answer.
5	a 6.NS.C.5 6.NS.C.6a	Student is unable to answer the question. None of the descriptions are correctly represented with an integer although student may make an effort to	Student correctly represents only one of the three descriptions with an integer.	Student correctly represents two of the three descriptions with integers.	Student correctly represents all three descriptions with integers: $-800, 960, 230$.

		answer the question.			
	b 6.NS.C.5 6.NS.C.6a 6.NS.C.6c	Student does not attempt to locate and label -800 and 800 and provides little or no evidence of reasoning.	Student attempts to locate and label -800 and 800 but makes an error. For example, both integers are not equidistant from 0 . Student may or may not correctly identify the relationship as opposites.	Student accurately locates but <i>does not label</i> -800 and 800 ; student correctly identifies the relationship between the integers as opposites. <u>OR</u> Student accurately locates and labels -800 and 800 on the number line but does not identify the relationship between the integers as opposites.	The student accurately locates and labels -800 and 800 on the number line and identifies the relationship between the integers as opposites.
	c 6.NS.C.5 6.NS.C.6a	Student response is incorrect, and no evidence of reasoning, such as an explanation or a diagram, is provided.	Student response is incorrect, but student attempts to answer the question with an explanation and/or diagram that demonstrates an understanding of the word “opposite” although it does not address the meaning of “the opposite of the opposite of $\$800$.”	Student response correctly states that: <i>Yes, Mr. Kindle’s reasoning is correct.</i> But the explanation and/or diagram provided does not completely explain why Mr. Kindle’s statement is correct.	Student response correctly states that: <i>Yes, Mr. Kindle’s reasoning is correct.</i> The stance is supported with a valid explanation that demonstrates a solid understanding of the fact that the opposite of the opposite of a number is the number itself.
6	a 6.NS.C.7b	Student response is missing.	Student provides an incorrect statement but provides some evidence of understanding the ordering of rational numbers in the written work.	Student response provides a correct ordering of -10 and -20 but without units and reference to the context of the situation.	Student response is correct. Student provides the statement: -10°F is warmer than -20°F or -20°F is colder than -10°F . <u>OR</u> Student provides some other explanation that contains a valid comparison of the two temperatures.
	b 6.NS.C.7a 6.NS.C.7b	Student response is missing.	Student attempts to write an inequality statement, but the statement is incorrect and does not include all three numbers. <u>OR</u> The incorrect inequality statement lists all three	Student writes an inequality statement that orders the three values with 10 as the greatest number, but the statement contains an error. For example, $-10 < -20 < 10$.	The correct answer is given as an inequality statement of $-20 < -10 < 10$ or $10 > -10 > -20$, and 10 degrees is the warmest temperature.

			numbers but does not list 10 as the greatest value.		
7	a 6.NS.C.6a 6.NS.C.6c	Student does not graph or incorrectly graphs Point P.	Student graphs Point P in the correct location on the number line.		
	b 6.NS.C.6c 6.NS.C.7a	Student does not select the correct answers – A, C and D or selects only some or extra answers.	Student selects all of the the correct answers – A, C, and D.		
8	a 6.NS.C.8	Student response is missing. <u>OR</u> All 4 points are inaccurately located.	Student accurately locates and labels 1–2 points.	Student accurately locates and labels 3 points.	Student accurately locates and labels all 4 points.
	b 6.NS.C.8	Student response is missing.	Student response is incorrect <u>AND</u> neither coordinate is stated as a negative number.	Student response is incorrect, but one of the coordinates is correct. For example, $(-6, 3)$ is the response, and the x -coordinate is correct.	Student provides a correct answer expressed as an ordered pair where both the x - and y -coordinates are negative numbers. For example, $(-6, -3)$.
	c 6.NS.C.8	Student response is missing. <u>OR</u> An incorrect answer is given with little or no application of mathematics used to solve the problem.	Student provides an incorrect answer for the distance, but demonstrates some evidence of understanding how to find the distance between the points although a significant error was made.	Student response correctly states a distance of 19 units, but the work shown does not adequately support the answer. <u>OR</u> An incorrect answer for the distance is given, but the work shown demonstrates a correct process with a minor error. For example, the student made an error in their addition or miscounted when using the number line.	Student response is complete and correct. The distance between the points is found to be 19 units, and an accurate and complete explanation, process, and/or diagram is provided to support the answer.

	d 6.NS.C.8	Student response is missing.	Student response is incorrect and neither coordinate is stated correctly.	Student response is incorrect, but one of the coordinates is correct. For example, $(5, -2)$ is the response, and the x -coordinate is correct.	Student response is correct and complete. Point E 's coordinates are $(5, 2)$.
--	---------------------------------	------------------------------	---	---	---

Question 9

Part a is worth 5 points – 1 pt for each building graphed in the appropriate location.

Part b is worth 4 points – 1 pt for each correct answer.